



IFW/ 1764A  
DOCKET NO.: D0617.70002US10

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Robert Charles Ladner et al.  
Serial No.: 09/893,878  
Confirmation No.: 1764  
Filed: June 29, 2001  
For: DIRECTED EVOLUTION OF NOVEL BINDING PROTEINS  
Examiner: Jeffrey S. Lundgren  
Art Unit: 1639

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to MAIL STOP Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 31<sup>st</sup> day of March, 2006.

Melissa L.B. Lyons

MAIL STOP Amendment  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Transmitted herewith are the following documents:

- **Information Disclosure Statement**
- **PTO Form 1449 with cited references**
- **Return Receipt Postcard**

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned at (617) 646-8000, Boston, Massachusetts.

A check in the amount of \$180.00 is enclosed to cover the information disclosure statement fee. If the fee is insufficient, the balance may be charged to Deposit Account 23/2825. A duplicate of this sheet is enclosed.

Respectfully submitted,  
*Robert Charles Ladner et al., Applicant*

By:   
MaryDilys S. Anderson, Ph.D., Reg. No.: 52,560  
Wolf, Greenfield & Sacks, P.C.  
600 Atlantic Avenue  
Boston, Massachusetts 02210-2206  
Telephone: (617) 646-8000

Docket No.: D0617.70002US10  
Date: March 31, 2006  
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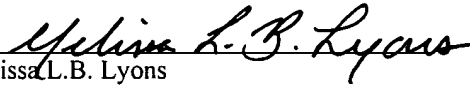
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Melissa L.B. Lyons

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**MAIL STOP AMENDMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

STATEMENT FILED PURSUANT TO THE DUTY OF  
DISCLOSURE UNDER 37 CFR §§1.56, 1.97 AND 1.98

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicant requests consideration of this Information Disclosure Statement.

PART I: Compliance with 37 C.F.R. §1.97

This Information Disclosure Statement has been filed more than three months after the filing date of this application and after the mailing date of the first Office action, but before the mailing date of any final action under 37 C.F.R. §1.113, a Notice of Allowance under 37 C.F.R. §1.311, or an action that otherwise closes prosecution in this application.

The fee of \$180.00 as set forth in 37 C.F.R. §1.17(p) is enclosed.

04/06/2006 WASFAW1 00000081 09893878

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PART II: Information Cited

The Applicant hereby makes of record in the above-identified application the information listed on the attached form PTO-1449 (modified PTO/SB/08). The order of presentation of the references should not be construed as an indication of the importance of the references.

The Applicant hereby makes the following additional information of record in the above-identified application.

The Applicant would like to bring to the Examiner's attention the following co-pending application that may contain subject matter related to this application:

<u>Docket No.</u>	<u>Serial No.</u>	<u>Filing Date</u>	<u>Inventor(s)</u>
D0617.70002US14	10/207,797*	31 July 2002	Ladner et al.

\*a copy of this reference is not provided herewith but will be provided by Applicant if the Examiner does not have access to a copy and/or requests a copy be submitted.

PART III: Remarks

Documents cited anywhere in the Information Disclosure Statement are enclosed unless otherwise indicated. It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. The enclosed form PTO-1449 (modified PTO/SB/08) be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;
3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

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By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

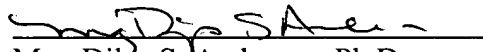
By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicant, the Examiner is urged to form his or her own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

Respectfully submitted,

By:

  
MaryDilys S. Anderson, Ph.D.  
Reg. No. 52,560  
Wolf, Greenfield & Sacks, P.C.  
600 Atlantic Avenue  
Boston, Massachusetts 02210-2206  
Telephone: (617) 646-8000

Docket No.: D0617.70002US10  
Date: March 31, 2006  
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FORM PTO-1449/A and B (modified PTO/SB/08)  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				APPLICATION NO.: 09/893,878		ATTY. DOCKET NO.: D0617.70002US10	
				FILING DATE: June 29, 2001		CONFIRMATION NO.: 1764	
				APPLICANT: Ladner et al.			
				GROUP ART UNIT: 1639		EXAMINER: Jeffrey S. Lundgren	
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**U.S. PATENT DOCUMENTS**

Examiner's Initials #	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication or Issue of Cited Document MM-DD-YYYY
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*	A1	4,304,863		Collins et al.	12-08-1981
*	A2	4,332,897		Nakano et al.	06-01-1982
*	A3	4,338,397		Gilbert et al.	07-06-1982
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*	A13	4,683,202		Mullis et al.	07-28-1987
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	A31	5,403,484		Ladner et al.	04-04-1995
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EXAMINER:	DATE CONSIDERED:
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# EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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	A50	2004-0023205	A1	Ladner et al.	02-05-2004

#### FOREIGN PATENT DOCUMENTS

Examiner's Initials #	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Translation (Y/N)
		Office/ Country	Number	Kind Code			
*	B1	EP	0 285 123	A2	Suomen Sokeri Oy	10-05-1988	
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*	B4	EP	0 339 942	A2	Novo-Nordisk A/S	11-02-1989	
*	B5	EP	0 341 444	A2	The General Hospital Corporation	11-15-1989	
*	B6	GB	2 188 322	A	Bayer Aktiengesellschaft	09-30-1987	
*	B7	GB	2 188 933	A	Bayer Aktiengesellschaft	10-14-1987	
*	B8	GB	2 208 511	A	Bayer Aktiengesellschaft	05-04-1989	
*	B9	WO	87/01374	A2	Pieczenik	03-12-1987	
*	B10	WO	88/01649	A1	Genex Corporation	03-10-1988	
*	B11	WO	88/06601	A1	Genex Corporation	09-07-1988	
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*	B13	WO	89/01968	A1	Novo Industri A/S	03-09-1989	
*	B14	WO	90/02809	A1	Protein Engineering Corporation	03-22-1990	

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*	B16	WO	91/18980	A1	Cetus Corporation	12-12-1991	
*	B17	WO	91/19818	A1	Affymax Technologies N.V.	12-26-1991	
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*	B19	WO	92/06204	A1	Ixsys Inc.	04-16-1992	
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*	B21	WO	94/18220	A1	The Scripps Research Institute	08-18-1994	
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	B31	WO	92/15677	A1	Protein Engineering Corporation	09-17-1992	

#### OTHER ART — NON PATENT LITERATURE DOCUMENTS

Examiner's Initials #	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)
*	C1	ABARZUA et al., Enzymatic techniques for the isolation of random single-base substitutions in vitro at high frequency. Proc Natl Acad Sci U S A. 1984 Apr;81(7):2030-4.	
*	C2	ADAMSON et al., Inhibition of human leukocyte elastase (HLE) by disulfide-cyclized analogs of alpha-antitrypsin (alphaAT). in Smith et al., eds. Peptides: Chemistry & Biology, Proceedings of the Twelfth American Peptide Symposium. 1991 June 16-21; Cambridge, Massachusetts, USA (ESCOM, Leiden: 1992). p. 859-60.	
*	C3	AGTERBERG et al., Use of outer membrane protein PhoE as a carrier for the transport of a foreign antigenic determinant to the cell surface of Escherichia coli K-12. Gene. 1987;59(1):145-50.	
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*	C5	ARAKI et al., Four disulfide bonds' allocation of Na <sup>+</sup> , K <sup>(+)</sup> -ATPase inhibitor (SPAI). Biochem Biophys Res Commun. 1990 Oct 15;172(1):42-6.	
*	C6	ARGOS et al., Analysis of sequence-similar pentapeptides in unrelated protein tertiary structures. Strategies for protein folding and a guide for site-directed mutagenesis. J Mol Biol. 1987 Sep 20;197(2):331-48.	
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*	C8	BARBAS et al., Assembly of combinatorial antibody libraries on phage surfaces: the gene III site. Proc Natl Acad Sci U S A. 1991 Sep 15;88(18):7978-82.	
*	C9	BASS et al., Hormone phage: an enrichment method for variant proteins with altered binding properties. Proteins. 1990;8(4):309-14.	
*	C10	BECKER et al., Synthesis and characterization of mu-conotoxin IIIa. Eur J Biochem. 1989 Oct 20;185(1):79-84.	
*	C11	BECKWITH et al., Genetic analysis of protein export in Escherichia coli. Methods Enzymol. 1983;97:3-11.	
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*	C21	BOEKE et al., Processing of filamentous phage pre-coat protein. Effect of sequence variations near the signal peptidase cleavage site. J Mol Biol. 1980 Dec 5;144(2):103-16.	
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*	C23	BOTSTEIN et al., Strategies and applications of in vitro mutagenesis. Science. 1985 Sep 20;229(4719):1193-201.	
*	C24	BOUGES-BOCQUET et al., In vitro genetic constructions devised to express given antigenic determinants at the surface of gram-negative bacteria. in Modern Approaches to Vaccines: Molecular and Chemical Basis of Virus. Robert M. Chanock, ed. 1984; p.225-33. (Previously listed in related cases as: Unite de Programmation Moleculaire et Toxicologie Genetique CNRSLA 271, INSERM U. 163, Instit Pasteur, 75015 Paris, France.)	
*	C25	BOUGES-BOCQUET et al., Linker mutagenesis in the gene of an outer membrane protein of Escherichia coli, lamB. J Cell Biochem. 1984;24(3):217-28.	

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Sheet	5	of	21		

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*	C31	CHANG et al., Expression of antibody Fab domains on bacteriophage surfaces. Potential use for antibody selection. J Immunol. 1991 Nov 15;147(10):3610-4.	
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*	C43	CLORE et al., Comparison of the solution and X-ray structures of barley serine proteinase inhibitor 2. Protein Eng. 1987 Aug-Sep;1(4):313-8.	
*	C44	CLORE et al., The determination of the three-dimensional structure of barley serine proteinase inhibitor 2 by nuclear magnetic resonance, distance geometry and restrained molecular dynamics. Protein Eng. 1987 Aug-Sep;1(4):305-11.	

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Sheet	6	of	21		

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<b>FORM PTO-1449/A and B (modified PTO/SB/08)</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				APPLICATION NO.: 09/893,878	ATTY. DOCKET NO.: D0617.70002US10
				FILING DATE: June 29, 2001	CONFIRMATION NO.: 1764
				APPLICANT: Ladner et al.	
				GROUP ART UNIT: 1639	EXAMINER: Jeffrey S. Lundgren
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